

## **REMARKS**

In the Final Office Action<sup>1</sup> mailed August 24, 2007, the Examiner rejected claims 1-28 under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,293,479 to Quintero et al. ("Quintero"); rejected claims 1, 3-10, and 12-28 under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,438,435 to Wada et al. ("Wada"); and rejected claims 1, 4-10, 13-23, and 26-28 under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,547,165 to Ishikawa et al. ("Ishikawa").

Applicant amends claims 1, 10, 19, 21, 22, and 27 and cancels claim 28 without prejudice or disclaimer. Thus, claims 1-27 are pending in this application. No new matter has been added.

### **I. Rejections under 35 U.S.C. § 102**

#### **A. Rejection of claims 1-27 as anticipated by Quintero**

Applicant respectfully traverses the rejection of claims 1-27 under 35 U.S.C. § 102(b) as anticipated by Quintero. In order for Quintero to anticipate claims 1-27, each and every element of claims 1-27 must be found, either expressly described or under principles of inherency, in Quintero. Further, "[t]he identical invention must be shown in as complete detail as is contained in the ... claims." See M.P.E.P. § 2131 quoting Richardson v. Suzuki Motor Co., 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). Quintero fails to anticipate claims 1-27 because Quintero does not disclose or suggest and every element recited in claims 1-27, as presently amended.

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<sup>1</sup> The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicant declines to automatically subscribe to any statement or characterization in the Office Action.

For example, claim 1, as amended, recites a method of designing a routing element connecting a plurality of elements in a system, comprising, among other things,

establishing guidelines for designing the routing element based on physical constraints of the routing element, the guidelines including recommendations for designing the routing element; and

automatically designing a routing pattern for the routing element based on the diagram and the guidelines.

Quintero fails to disclose or suggest at least these features of claim 1.

Quintero discloses a tool for designing assemblies of modular furniture, wire harness assemblies, propellers, bolts, and other fasteners, but only explains use of the tool with respect to creating modular furniture. Quintero, col. 1, ll. 14-17. The tool includes a knowledge base, a rule base, an inference engine, an expert user interface, and a graphic system that interrelate to allow a user to create a design for a particular system. Quintero, col. 7, ll. 3-10.

The knowledge base contains information about components used in the design, such as connection vectors (i.e., connection points on the components), graphical information (e.g., drawings), assembly instructions, and availability. Quintero, col. 7, ll. 17-30. The rule base contains information to determine proper and improper combinations of components during the design process. Quintero, col. 7, ll. 48-64. The inference engine accepts user choices through menu selection (via the expert user interface) and applies rules from the rule base using information from the knowledge base to guide the user during the design process. Quintero, col. 8, ll. 37-39 and 43-46. The inference engine also applies a design rule check (DRC) to detect errors in the design when a design is saved. Quintero, col. 8, ll. 47-50.

Although the tool of Quintero provides guidance to a user designing modular furniture or another system by incrementally applying rules to the design, the tool does not “[establish] guidelines for designing the routing element based on physical constraints of the routing element, the guidelines including recommendations for designing the routing element; and automatically [design] a routing pattern for the routing element based on the diagram and the guidelines,” as recited by claim 1. That is, incrementally providing design selections to a user based on rules as the user designs the system does not constitute “establishing guidelines for designing the routing element based on physical constraints of the routing element, the guidelines including recommendations for designing the routing element; and automatically designing a routing pattern for the routing element based on the diagram and the guidelines.” The rules of Quintero are not established “based on physical constraints of the routing element.”

For at least these reasons, Quintero does not disclose or suggest each and every element recited claim 1, and thus cannot anticipate claim 1 under 35 U.S.C. § 102(b). Applicant respectfully requests the withdrawal of the rejection of claim 1 under 35 U.S.C. § 102(b).

Amended independent claims 10, 19, 21, 22, and 27, although of a different scope than claim 1, contain similar recitations to those discussed above in connection with claim 1. Quintero thus cannot anticipate claims 10, 19, 21, 22, and 27 under 35 U.S.C. § 102(b) for at least the same reasons as discussed above in connection with claim 1. Applicant respectfully requests the withdrawal of the rejection of independent

claims 10, 19, 21, 22, and 27 under 35 U.S.C. § 102(b) as being anticipated by Quintero.

Claims 2-9, 11-18, 20, and 23-26 depend from one of claims 1, 10, 19, 21, 22, and 27 and thus contain all the elements thereof. Quintero thus cannot anticipate dependent claims 2-9, 11-18, 20, and 23-26 for at least the same reasons as discussed above in connection with independent claims 1, 10, 19, 21, 22, and 27. Applicant respectfully requests the withdrawal of the rejection of claims 2-9, 11-18, 20, and 23-26 under 35 U.S.C. § 102(b) as being anticipated by Quintero.

**B. Rejection of claims 1, 3-10, and 12-27 as anticipated by Wada**

Applicant respectfully traverses the rejection of claims 1, 3-10, and 12-27 under 35 U.S.C. § 102(e) as anticipated by Wada. Wada does not disclose or suggest each and every element recited in claims 1, 3-10, and 12-27.

Wada discloses a computer tool for creating wiring harness diagrams. Wada, Abstract. First, an operator enters the basic entities of the wiring diagram using the mouse and keyboard. Wada, col. 7, ll. 13-19; and col. 7, ll. 28 - col. 8, l. 4. The basic entities of a wiring diagram include electric cable forming the wiring, connectors, binding belts, connections, and terminals. Wada, col. 7, ll. 22-27. The operator then inputs lengths for each of the electric cables (wires) and graphically positions the arrangement on the display screen. Wada, col. 8, ll. 5-18. The operator then inputs properties of the connectors and/or the connections therebetween, including a name, a terminal being connected, a color, and a type of cable. Wada, col. 8, ll. 14-61. The system generates a wiring length table (see., e.g., Figs. 10A-10D) including wiring lengths between each connector. Wada, col. 9, l. 21-26. The system then judges whether the connections of

the independent wiring harness comply with a predetermined rule (e.g., manufacturing restrictions). Wada, col. 11, ll. 54-66. The operator can then generate the wiring harness diagram by clicking icon 66 or 68. Wada, col. 9, ll. 1-14.

Like Quintero, although the tool of Wada allows a user to design a wiring harness and to check the connections of the wiring harness against a predetermined rule, it does not “[establish] guidelines for designing the routing element based on physical constraints of the routing element, the guidelines including recommendations for designing the routing element; and automatically [design] a routing pattern for the routing element based on the diagram and the guidelines,” as recited by claim 1. That is, checking a wiring harness design against a rule does not constitute “establishing guidelines for designing the routing element based on physical constraints of the routing element, the guidelines including recommendations for designing the routing element; and automatically designing a routing pattern for the routing element based on the diagram and the guidelines,” as required by claim 1. Wada’s rules are not established “based on physical constraints of the routing element.”

For at least these reasons, Wada does not disclose or suggest each and every element recited claim 1, and thus cannot anticipate claim 1 under 35 U.S.C. § 102(e). Applicant respectfully requests the withdrawal of the rejection of claim 1 under 35 U.S.C. § 102(e).

Amended independent claims 10, 19, 21, 22, and 27, although of a different scope than claim 1, contain similar recitations to those discussed above in connection with claim 1. Wada thus cannot anticipate claims 10, 19, 21, 22, and 27 under 35 U.S.C. § 102(e) for at least the same reasons as claim 1. Applicant respectfully

requests the withdrawal of the rejection of independent claims 10, 19, 21, 22, and 27 under 35 U.S.C. § 102(e) as being anticipated by Wada.

Claims 3-9, 12-18, 20, and 23-26 depend from one of claims 1, 10, 19, 21, 22, and 27 and thus contain all the elements thereof. Wada thus cannot anticipate dependent claims 2-9, 11-18, 20, and 23-26 for at least the same reasons as discussed above in connection with independent claims 1, 10, 19, 21, 22, and 27. Applicant respectfully requests the withdrawal of the rejection of claims 2-9, 11-18, 20, and 23-26 under 35 U.S.C. § 102(e) as being anticipated by Wada.

**C. Rejection of claims 1, 4-10, 13-23, 26, and 27 as anticipated by Ishikawa**

Applicant respectfully traverses the rejection of claims 1, 4-10, 13-23, 26, and 27 under 35 U.S.C. § 102(e) as being anticipated by Ishikawa. Ishikawa does not disclose or suggest each and every element of claims 1, 4-10, 13-23, and 26-28.

Ishikawa discloses an apparatus for designing a vehicle wiring harness. Ishikawa, col. 1, ll. 7-9. A user inputs information about auxiliary units to be connected to the wiring harness; the auxiliary units themselves; wire attributes, such as wire type, wire diameter and color; and a drawing-passing coordinates. Ishikawa, col. 6, ll. 38-54. The user also enters information about points through which the wiring harness passes; wire length information; and coordinates of a starting point and an ending point of a route. Ishikawa, col. 6, l. 55 - col. 7, l. 2. The system subsequently displays on a screen a route drawing including the auxiliary units using the entered information. Ishikawa, col. 7, ll. 15-32. Subsequently, the user may select a particular route displayed in the drawing, and the system displays information about the wire passing

through the selected route in response to the selection. Ishikawa, col. 7, ll. 42-61. For example, in response to the user's selection of the route "P2" shown in Fig. 14, the system will display wiring information about the "P2" route, such as the number of wires passing through "P2" and the diameter of the harness in this area. Ishikawa, col. 11, l. 51 - col. 12, l. 6.

The system of Ishikawa thus allows the user to manually input information to design the wiring harness and displays information about a user-selected route in the wiring harness. The system, however, does not "[establish] guidelines for designing the routing element based on physical constraints of the routing element, the guidelines including recommendations for designing the routing element; and automatically [design] a routing pattern for the routing element based on the diagram and the guidelines," as recited in claim 1. Unlike Quintero and Wada, Ishikawa does not utilize a rule check or the like to aid the user in designing the wiring harness, but instead accepts the user's design without regard for rules.

Ishikawa thus also does not disclose or suggest "establishing guidelines for designing the routing element based on physical constraints of the routing element, the guidelines including recommendations for designing the routing element; and automatically designing a routing pattern for the routing element based on the diagram and the guidelines," as recited by claim 1. Displaying information about a selected route or segment of an entirely user-designed wiring harness does not constitute "establishing guidelines for designing the routing element based on physical constraints of the routing element, the guidelines including recommendations for designing the routing element;

and automatically designing a routing pattern for the routing element based on the diagram and the guidelines," as required by claim 1.

For at least these reasons, Ishikawa does not disclose or suggest each and every element recited claim 1, and thus cannot anticipate claim 1 under 35 U.S.C. § 102(e). Applicant respectfully requests the withdrawal of the rejection of claim 1 under 35 U.S.C. § 102(e) as being anticipated by Ishikawa.

Amended independent claims 10, 19, 21, 22, and 27, although of a different scope than claim 1, contain similar recitations to those discussed above in connection with claim 1. Ishikawa thus cannot anticipate claims 10, 19, 21, 22, and 27 under 35 U.S.C. § 102(e) for at least the same reasons as claim 1. Applicant respectfully requests the withdrawal of the rejection of independent claims 10, 19, 21, 22, and 27 under 35 U.S.C. § 102(e) as being anticipated by Ishikawa.

Claims 4-9, 13-18, 20, 23, and 26 depend from one of claims 1, 10, 19, and 21 and thus contain all the elements thereof. Ishikawa thus cannot anticipate dependent claims 4-9, 13-18, 20, 23, and 26 for at least the same reasons as discussed above in connection with independent claims 4-9, 13-18, 20, 23, and 26. Applicant respectfully requests the withdrawal of the rejection of claims 4-9, 13-18, 20, 23, and 26 under 35 U.S.C. § 102(e) as being anticipated by Ishikawa.

## **II. Conclusion**

In view of the foregoing, Applicant respectfully requests reconsideration of this application and the timely allowance of the pending claims.

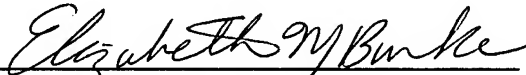


Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account 06-0916.

Respectfully submitted,

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